

(2) Amendments to the Specification

Replace the first paragraph on page 7 with the following:

-- Fig. 3 shows the faces 42 of two pipe elements 18 on which ~~a~~ a propulsion force 40 is exerted. The two faces 42 of the pipe elements 18 are joined by an expansion element 44 formed as a hollow profile. The cavity of the expansion element 44 is filled with a pressure-resistant fluid 46, the pressure P can amount to far more than 100 bar. —

Replace the paragraph bridging pages 8 and 9 with the following:

-- However it is of essential significance that the cavities of all actuatable expansion elements 44 can be connected together communicating by way of the pressure line 56. The pressure line 56 extending in the inferior of the pipeline 14 over the entire length can be connected with all expansion elements 54 or just some thereof. Through the filler valve 58 the cavity of an expansion element 44 is suitably filled with a pressure-resistant fluid 46 before application of the propulsion force 40, and at the same time purged through at least one purge valve 66. By way of these two valves 58, 66 it is also possible to measure the existing internal pressure of the fluid 46 with a pressure meter 64. Using at least three local measurements of the expansion of joints 70 in the advance direction 28, the expansion plane in a Joint 70 can be determined. From the parameter pressure of the fluid 46 obtained and the geometry of the expansion plane in the Joint 70, the size and eccentricity ~~72~~ 52 of the resulting propulsion force 40 for the described Joint function can be determined in location and amount using a reversible load deformation law. From this again the size and direction of the earth pressures transverse to the neutral axis N can be determined and hence knowledge obtained on the size of the risk of damage or even breakage of the pipe element 18 in the transverse direction. This gives a reliable and precise method of monitoring and controlling the propulsion forces 40, which can be achieved with simple, economic and robust means. The Joint 70 in a variant which is not shown can also be concentric, spiral or have a complicated geometry which does not generate any transverse forces. —